

The marine isopod family Stenetriidae from coral reefs at Bora Bora and Moorea, Society Islands, with descriptions of four new species (Crustacea)

by

Hans-Georg MÜLLER *

With 84 figures

ABSTRACT

Stenetrium algreti n. sp., *Stenetrium maharepa* n. sp., *Stenetrium temae* n. sp. and *Stenetrium wilsoni* n. sp. are described. *Stenetrium hansenii* Nobili, 1906 is redescribed. All species have been found associated with mainly dead corals in exposed locations on reefs at Bora Bora and Moorea, Society Islands.

This paper reports on a collection of five species of littoral to shallow water isopods from the Society Islands, French Polynesia. The material has been collected along the reefs surrounding the islands Bora Bora and Moorea. There has been no previous work published on Stenetriidae from the Society Islands, therefore it is not surprising that four of the five species obtained were undescribed. Up to now there are only two other reports on Stenetriidae from French Polynesia, dealing with three species of *Stenetrium* Haswell, 1881 from the Tuamotu Archipelago (NOBILI 1906, 1907). One of these poorly described species, *Stenetrium hansenii* Nobili, 1906 has been rediscovered after more than eighty years and will be redescribed herein. It became obvious that all species involved in that report mainly have been found in more or less exposed locations near the reef slope, not a single specimen has been collected in sheltered places in the lagoons of fringing reefs.

* Institut für Allgemeine und Spezielle Zoologie der Justus-Liebig-Universität, Heinrich-Buff-Ring 29, D-6300 Giessen, F.R. Germany (present address).

Centre de l'Environnement, Antenne Muséum (Ecole Pratique des Hautes Etudes, E.P.H.E.), B.P. 1013, Papetoai, Moorea, Polynésie Française.

Laboratoire de Biologie Marine et Malacologie, Université de Perpignan, Avenue de Villeneuve, F-66025 Perpignan Cedex, France.

This is well in agreement with the results obtained from the asellote family Joeropsidae (MÜLLER, 1989).

Detailed information on the collecting localities is given in GALZIN & POINTIER (1985) and PIRAZZOLI *et al.* (1985).

Specimens are deposited in the Senckenberg-Museum, Frankfurt a. M. (SMF), the Muséum national d'Histoire naturelle, Paris (MNHN) and the Muséum d'Histoire naturelle, Genève (MHNG).

ACKNOWLEDGMENTS

The research has been carried out mainly at the marine biological station Antenne Museum (Ecole Pratique des Hautes Etudes, E.P.H.E.) at Moorea, French Polynesia and the Laboratoire de Biologie Marine et Malacologie, Université de Perpignan, France (director: Dr. Bernard Salvat). My thanks are due to Dr. Salvat for making it possible to use the facilities of the institutes in Moorea and Perpignan, also to Dr. René Galzin, director of the Antenne Museum and Mr. James Algret, station officer for their help organizing the field work at Moorea.

Stenetrium Haswell, 1881 **Stenetrium algreti** n. sp. (Figs 1-20)

H o l o t y p e : ♂ (SMF 18622), Bora Bora; fringing reef near Vaitape, dead corals covered with sponges and algae, 0.5-1 m, near slope, 27 February-6 March 1988.

P a r a t y p e s : 33♂♂, 20♀♀ (10 ov.), 28 immature adults (SMF 18623), together with holotype. 1♂, 1 ov. ♀, 2 immature adults (1♂, 1 ov. ♀ MNHN, 2 immature adults MHNG), Moorea; crest of barrier reef near Maharepa, about 2.6 km west of airport, dead corals, 0.5 m, March 1988. 1♂ (MHNG), Moorea; crest of Tiahura barrier reef, dead corals, 0.5-1 m, 25 March 1988.

D i a g n o s i s : Species with pereopod 1 sexually dimorphic, propodus with anterodistal rounded lobe, eyes reduced to about 5 ocellae and anterolateral corners of cephalon rounded. Best distinguished from other species of similar habitus through the shape of pereopod 1 and pleopods 1-3 of the ♂.

D e r i v a t i o n o m i n i s : This species is dedicated to Mr. James Algret, station officer of the Antenne Museum at Moorea, for his valuable help coordinating my field work.

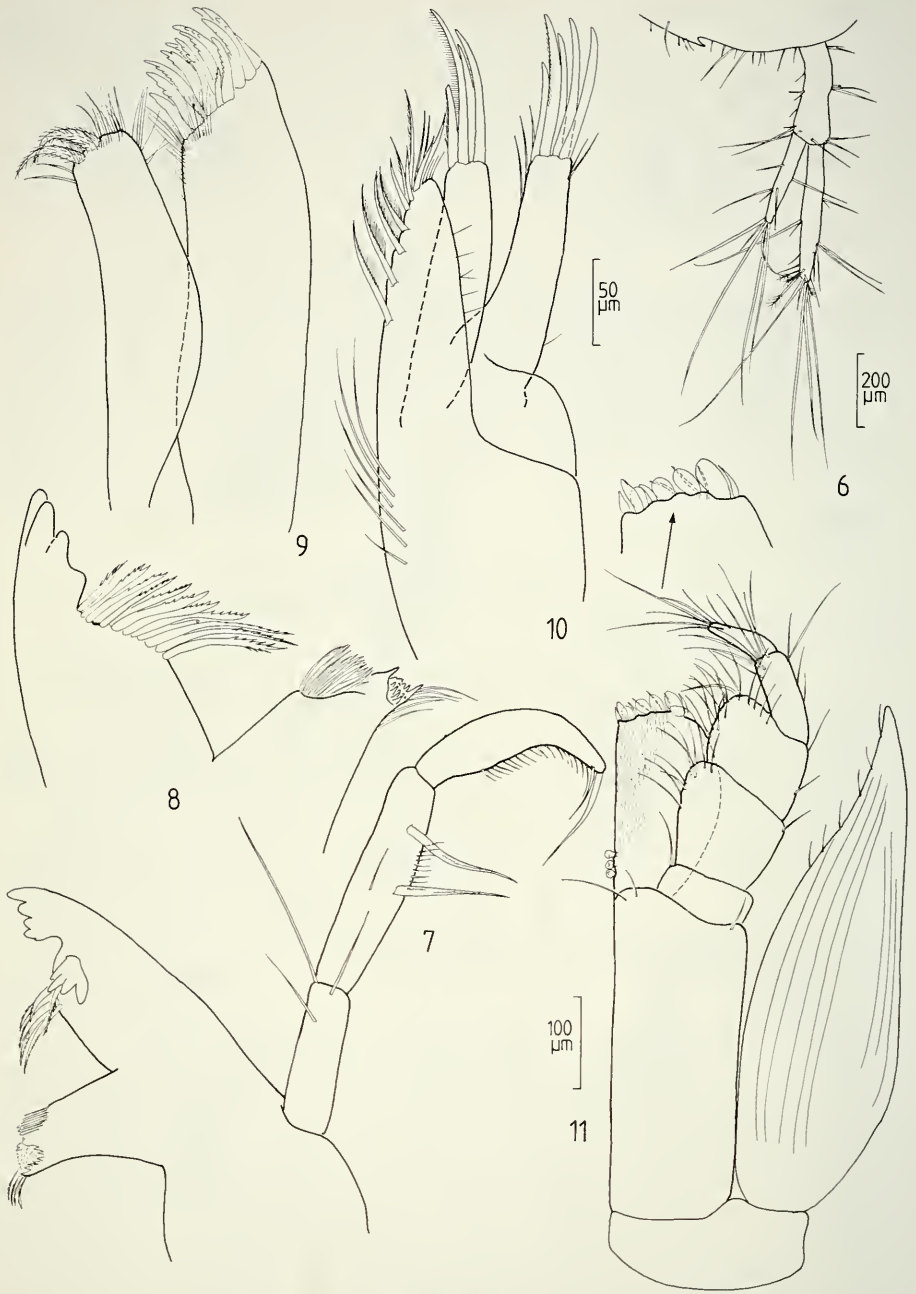
D e s c r i p t i o n , ♂ holotype: Total length 5.0 mm (front margin of rostrum to tip of pleotelson), maximum width 1.0 mm (across pereonite 1). Body narrow, parallel-sided, about 4.1 times longer than wide, without any pigmentation. Head with lateral margins entire, convex, anterolateral corners rounded, rostral plate almost straight; dorsolateral eyes small, reduced to about 5 ocellae. Pereonite 1 with coxae greatly enlarged, distally produced and acute, forming lateral bounds of pereonite; a fine suture line between pereonite and coxa visible at high magnification. Pereonites decreasing in length from 1-4, increasing in length from 5-7. Posterolateral corners of pereonites 5-6 rounded, of pereonite 7 acute. Coxae of all pereonites visible in dorsal view. Free pleonites vestigial. Pleotelson 1.1 times longer than wide, lateral margins entire except for single tooth in posterior half, posterior margin between lateral teeth roughly semicircular.

Antenna 1, peduncle of 3 segments; proximal segment longest and widest; second and third segment subequal in length; flagellum of 11 articles, 7 distal articles with aesthetasc;



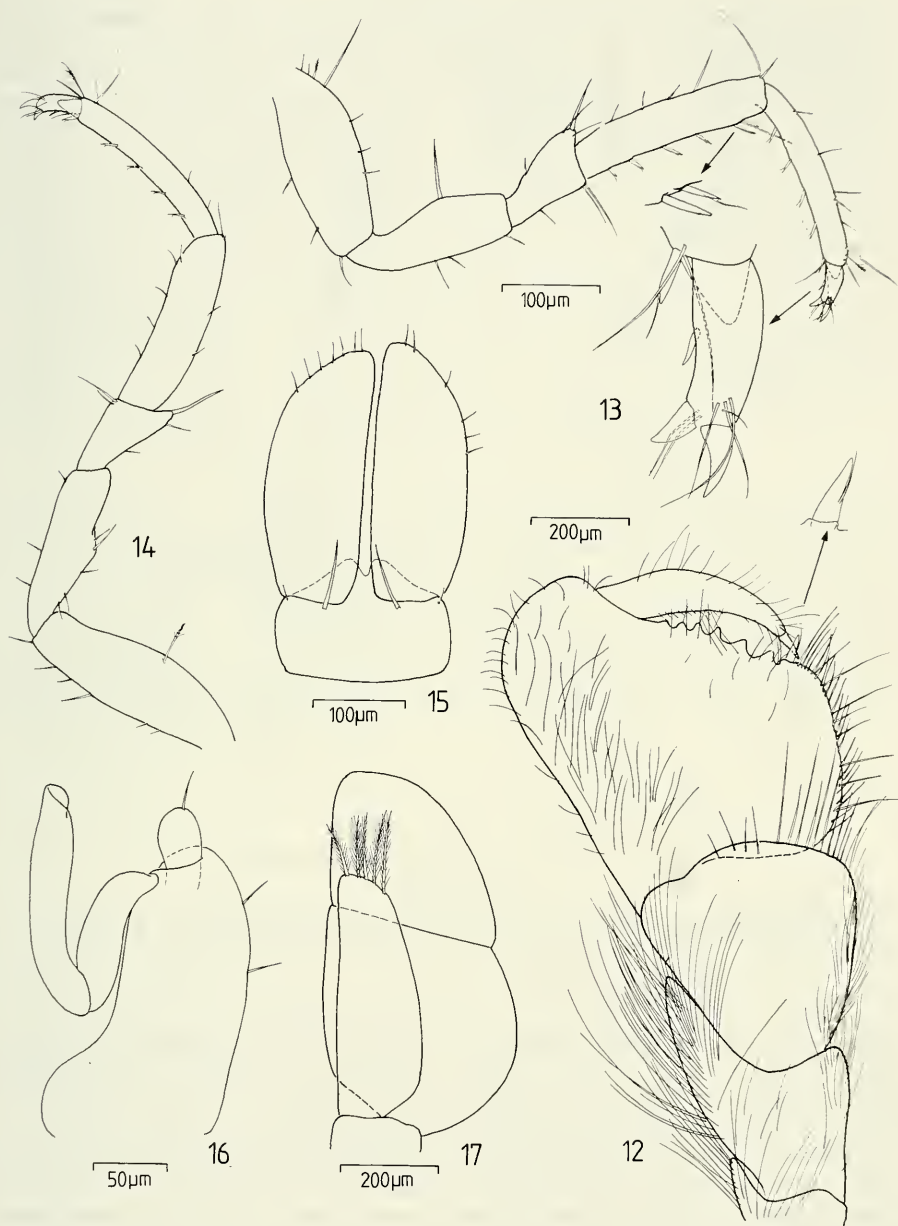
FIGS 1-5.

Stenetrium algreti n. sp., ♂ holotype: 1) dorsal view; 2) anterolateral part of body in dorsal view; 3) coxa and lateral margin of pereonite 1, dorsal view; 4) antenna 1; 5) 4 proximal peduncle segments of antenna 2.



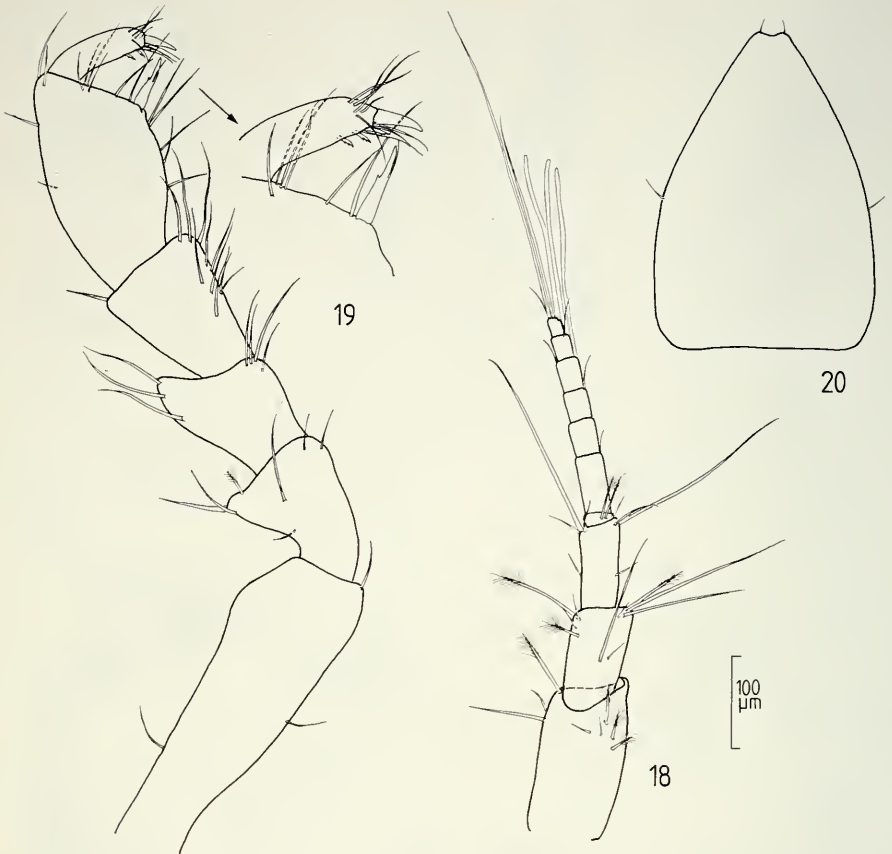
FIGS 6-11.

Stenetrium algreti n. sp., ♂ holotype: 6) uropod and posterolateral margin of pleotelson, dorsal view; 7) left mandible; 8) right mandible, palp omitted; 9) maxilla 1; 10) maxilla 2; 11) maxilliped.



FIGS 12-17.

Stenetrium algreti n. sp., ♂ holotype: 12) pereopod 1, basis omitted; 13) pereopod 2; 14) pereopod 7; 15) first pleopods; 16) second pleopod; 17) third pleopod.



FIGS 18-20.

Stenetrium algreti n. sp., ♀ paratype: 18) antenna 1; 19) pereopod 1; 20) operculum.

elongate simple setae on peduncle segments 2-3 and terminal article of flagellum. Antenna 2, broken off at fourth peduncle segment; segment 3 with setiferous squama. Right mandible, incisor of 4 cusps; spine row of 13 serrate spines; apex of molar with several toothlike tubercles and setae. Left mandible, incisor of 4-5 cusps, lacinia mobilis with 4 cusps; spine row with 6 fringed spines; all 3 segments of mandibular palp with several setae of different lengths; second palp segment with 2 strong spines in distal half. Maxilla 1, narrow inner lobe with 2 distal plumose spines, 2 simple setae and several setules; outer lobe with about 13 serrate spines and several setules near inner distal margin. Maxilla 2, inner ramus with about 10, partly combed and fringed spines along inner distal margin; inner lobe of outer ramus with 4 distal spines; outer lobe of outer ramus with 5 distal spines and about 5 short simple setae. Maxillipedal endite with 3 coupling hooks on medial margin and several membranous spine-like structures distally, as figured;

second segment of 5-segmented palp longest and widest; epipod extending beyond 3rd palp segment, bearing 6 short simple setae along inner distal margin. Pereopod 1 densely setose; palm of propodus almost straight, with about 6 distinct, rounded tubercles and proximal compound spine; propodus anterodistally produced into broadly rounded lobe; dactylus somewhat curved, setose; apex of short unguis just reaching beyond compound spine of propodal palm. Dactyli of ambulatory pereopods 2-7 biunguiculate, similar to each others. First pleopods, rami roughly oval, bearing row of 6-7 short simple setae along outer distal margin. Pleopod 2, apex of endopod without any trace of setules, scales or spine-like structures, rounded. Pleopod 3 with operculum-like 2-segmented exopod; narrow endopod with 5 short distal feathered setae. Uropods with basal segment 3 times longer than wide; inner ramus longer than outer ramus, both with elongate simple setae; inner ramus also with about 4 feathered sensory setae.

♀: Similar in habitus to ♂. Antenna 1, flagellum with only 7 articles, 3 distal articles with aesthetasc. Pereopod 1 much smaller than in ♂, palm almost straight with strong proximal compound spine; cutting edge of dactylus with two short, distal serrate spines. Operculum shield-shaped, margins bearing 4 short simple setae, apex concave.

D i s t r i b u t i o n : Bora Bora and Moorea, Society Islands.

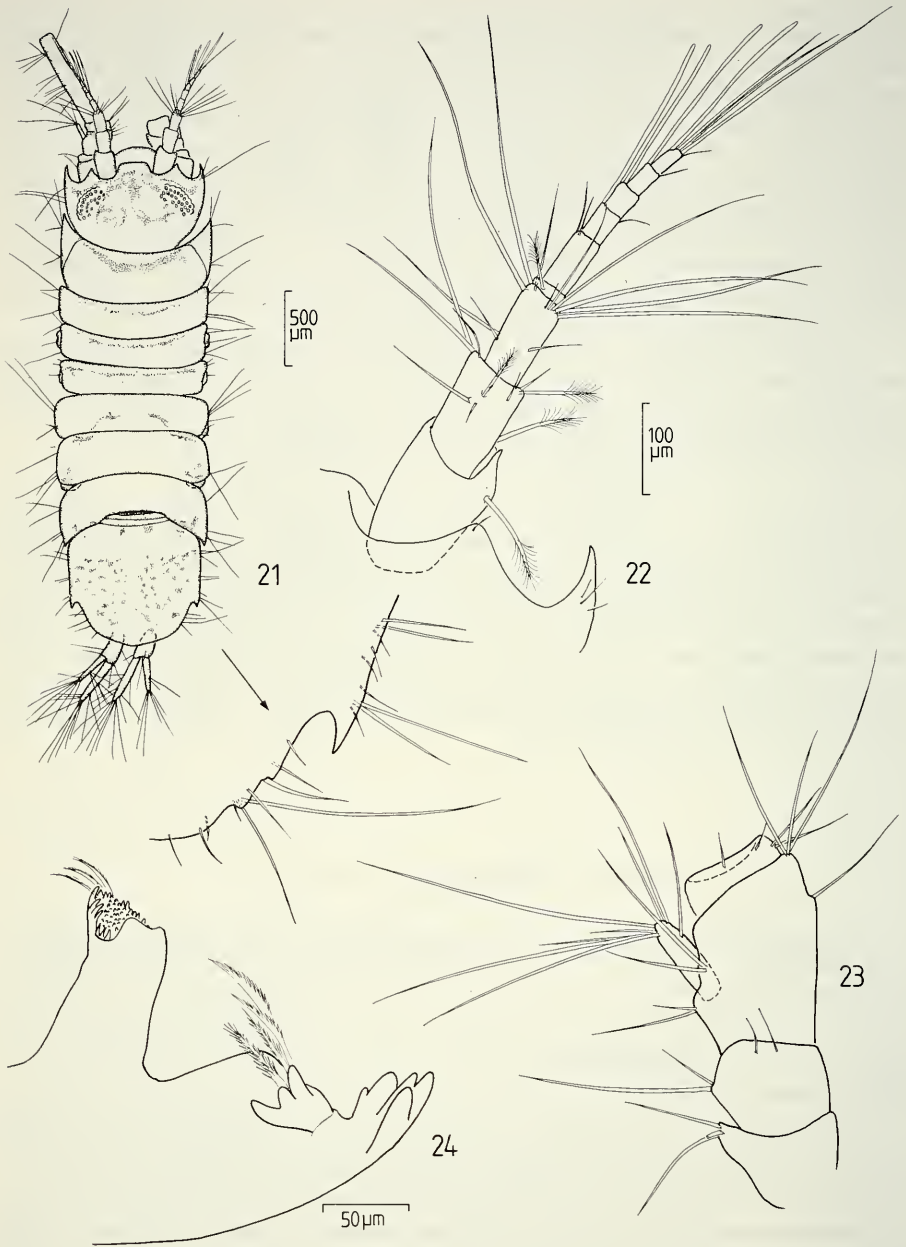
R e m a r k s : *S. algrei* n. sp. belongs to a complex of species characterized through the lack of any pigmentation, rostral plate blunt and wider than long, number of ocellae greatly reduced and through having the lateral pleotelsonic margin with a single incision. From these, *Stenetrium minocule* Menzies & Glynn, 1968 from the Caribbean, *Stenetrium siamense* Hansen, 1905 from Indonesia and another species recently discovered by the author at Réunion Island in the Indian Ocean (MÜLLER, in press) it can be easily distinguished by the anterodistal, broadly rounded lobe of the propodus of ♂ pereopod 1 and the shape of the distal endopod of the second ♂ pleopod. Apparently it is more closely related to *S. minocule*.

***Stenetrium hanseni* Nobili, 1906 (Figs 21-37)**

M a t e r i a l : 58♂♂, 40♀♀ (15 ov., 12 largiver), 34 immature adults (SMF 18624), Bora Bora; fringing reef near Vaitape, dead corals covered with sponges and algae, 0.5-1 m, near slope, 27 February-6 March 1988. 5♂♂, 2♀♀ (1 ov., 1 larviger) (MNHN), Moorea; crest of barrier reef near Maharepa, dead corals, 0.5 m, March 1988. 1♂, 1 ov. ♀ (MHNG), Moorea; Temae the Islet Reef, north-east of airport, dead corals in channel near beach, about 2 m, 31 March 1988. 18♂♂, 9♀♀ (6 ov., 1 larviger) (MHNG), Moorea; crest of Tiahura barrier reef, dead corals, 0.5-1 m, 25 March 1988.

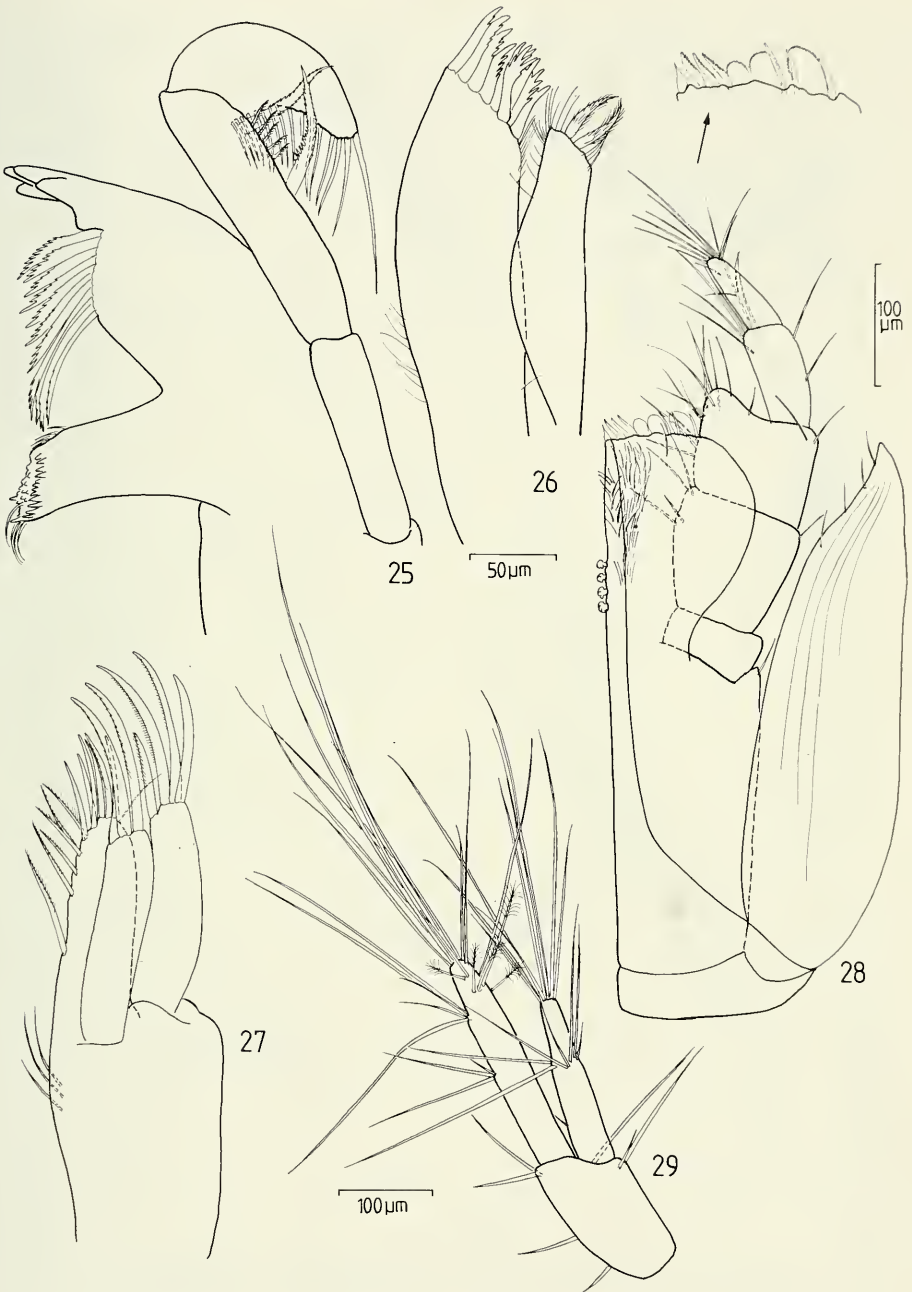
D i a g n o s i s : *S. hanseni* is well distinguished from all other members of the genus by the shape of the posterolateral, toothed margins of propodus and carpus.

D e s c r i p t i o n , ♂: Total length about 3.3 mm (front margin of rostrum to tip of pleotelson), maximum width 1.0 mm (across pereonite 1). Body parallel-sided, about 3.2 times longer than wide with scattered pigment patches. Head with lateral margins entire, anterolateral corners produced and acute; frontal margin of rostrum blunt; dorsolateral eyes very large, of about 20 ocellae. Pereonite 1 with coxae enlarged, these distally produced and acute, forming lateral bounds of pereonite; suture line between coxae and pereonite distinct; posterolateral corners of pereonite 7 acute; coxae of



FIGS 21-24.

Stenetrium hanseni Nobili, 1906; ♂: 21) dorsal view; 22) antenna 1 and anterolateral corner of cephalon; 23) 4 proximal peduncle segments of antenna 2; 24) left mandible, palp omitted.



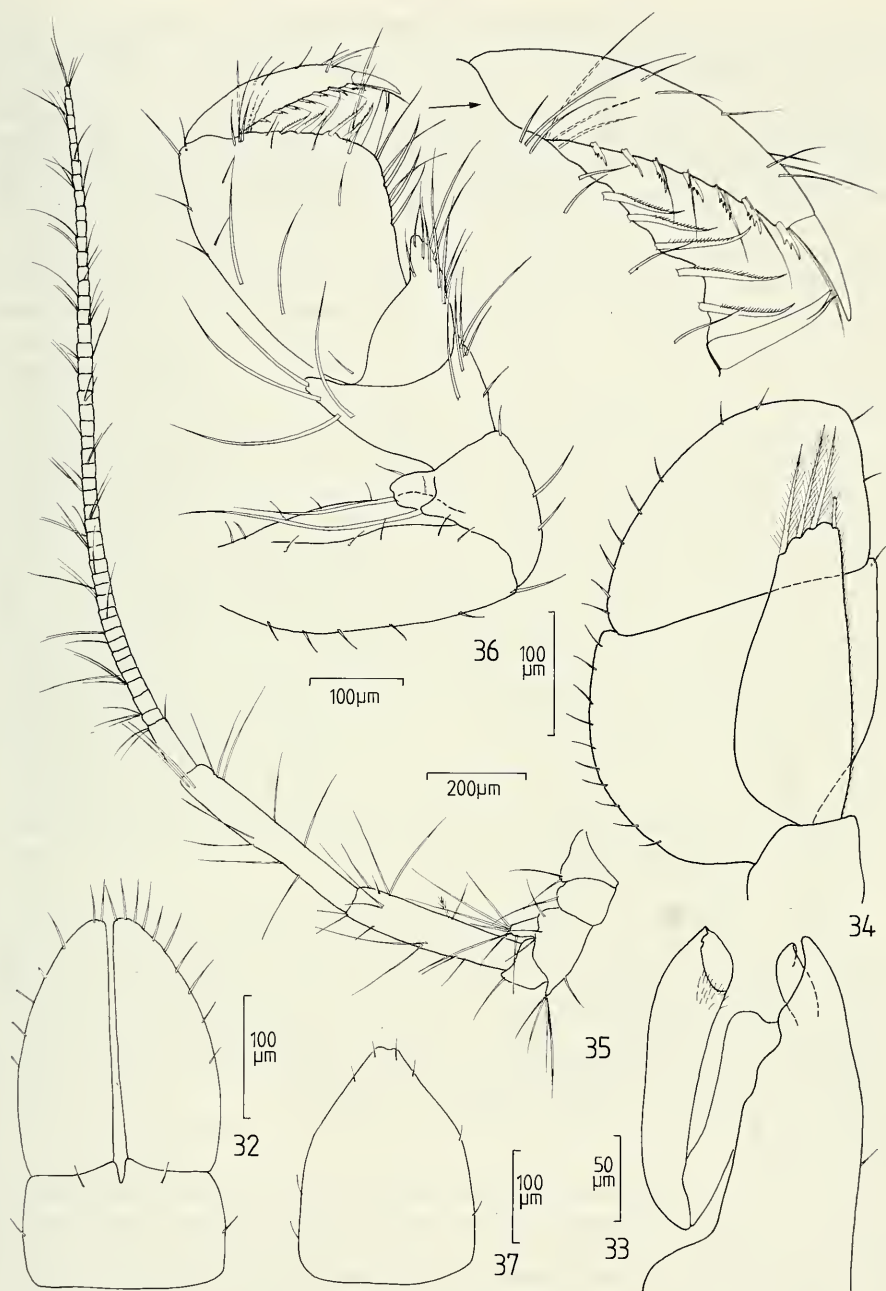
FIGS 25-29.

Stenetrium hanseni Nobili, 1906; ♂ : 25) right mandible; 26) maxilla 1; 27) maxilla 2; 28) maxilliped; 29) uropod.



FIGS 30-31.

Stenetrium hanseni Nobili, 1906; ♂: 30) pereopod 1; 31) pereopod 2.



FIGS 32-37.

Stenetrium hanseni Nobili, 1906 (♂: 32-34; ♀: 35-37): 32) first pleopod; 33) second pleopod; 34) third pleopod; 35) antenna 2; 36) pereopod 1; 37) operculum.

pereonites 1 and 3-6 visible in dorsal view. Free pleonites vestigial. Pleotelson as long as wide, lateral margins entire except for single tooth in posterior half; posterior margin between lateral teeth semicircular.

Antenna 1, peduncle of 3 segments; first segment largest; second and third segment subequal in length; flagellum of 6 articles, 4 distal articles with aesthetasc; elongate simple setae on peduncle segments 1-3 and terminal article of flagellum. Antenna 2, broken off at fourth peduncle segment; segment 3 with setiferous squama. Right mandible, incisor of about 4 cusps and 11 serrate spines in spine row; apex of molar blunt with several toothlike tubercles and setae. Second and third segment of mandibular palp furnished with several setae, second segment with 2 strong spines. Left mandible, incisor of 5, lacinia mobilis of 4 cusps; spine row of 4 denticulate spines. Maxilla 1, narrow inner lobe with 2 distal plumose spines and several setules; outer lobe with about 9 serrate spines and some setules near inner distal corner. Maxilla 2, inner ramus with about 12, partly fringed spines along distal and medial margin; inner lobe of outer ramus with 3, of outer lobe of outer ramus with 4 curved, distal spines. Endite of maxilliped distally widened, with 4 coupling hooks on medial margin and several membranous, spine-like structures distally, as figured; second segment of 5-segmented palp largest; epipod just reaching beyond distal margin of third palp segment, bearing 4 short simple setae near inner distal margin. Pereopod 1 sexually dimorphic, enlarged in σ ; unguis of about 1/5 length of curved dactylus, the latter with several scattered simple setae, mainly at posterior margin; palm of propodus with two distinct teeth, of which the proximal one is largest; carpus with conspicuous posterodistal lobe, produced into 5 distinct teeth accompanied by several simple setae; merus rectangular, with posterodistal oval, densely setose lobe. Dactyli of ambulatory pereopods 2-7 biunguiculate, similar to each others, spination and length ratios of segments as figured. Medial margins of first pleopods parallel-sided, ectal margin convex, tapering in distal half, with about 7-10 short simple setae. Pleopod 2 as figured, endopod with several distal minute setules. Pleopod 3 with operculum-like, 2-segmented exopod, bearing about 20 short simple setae; narrow endopod with 4 distal feathered setae. Uropods with basal segment about 2 times longer than wide; inner ramus almost 1/3 longer than outer ramus, both with elongate simple setae; inner ramus additionally with about 5 feathered sensory setae.

\varnothing : Similar in habitus to σ . Antenna 2, of 6 peduncle segments; 4 proximal segments short, like in σ ; 2 distal segments of peduncle elongate, subequal in length, with several scattered simple setae; flagellum of about 47 setose articles, the proximal one being longest. Pereopod 1 smaller than in σ ; palm of propodus almost straight with 5 curved, combed spines; cutting edge of dactylus with row of 7 short dentate spines and about 5 simple setae increasing in length distally. Operculum shield-shaped, with about 8 short simple setae near lateral and distal margins, apex concave.

D i s t r i b u t i o n : Fakahina, Tuamotu Archipelago; Bora Bora and Moorea, Society Islands.

R e m a r k s : This species has been described by NOBILI (1906) from Fakahina, Tuamotu Archipelago and figured in NOBILI (1907: 64, Pl. III, Fig. 3). It is the only species of 3 described by him from that area I could find at the Society Islands. Although the type-material has not been available for re-examination and the original description is incomplete, *S. hanseni* is easily recognizable by the shape of the posterior margin of the carpus in the σ pereopod 1. In general habitus it resembles *S. wilsoni* n. sp. described in that paper, distinguished from that species through its more distinct pigment pattern, shape of the first σ pereopod and second pleopod.

***Stenetrium maharepa* n. sp. (Figs 38-54)**

H o l o t y p e : pre-♂ (SMF 18625), Moorea; crest of barrier reef near Maharepa, about 2.6 km west of airport, dead corals, 0.5 m, March 1988.

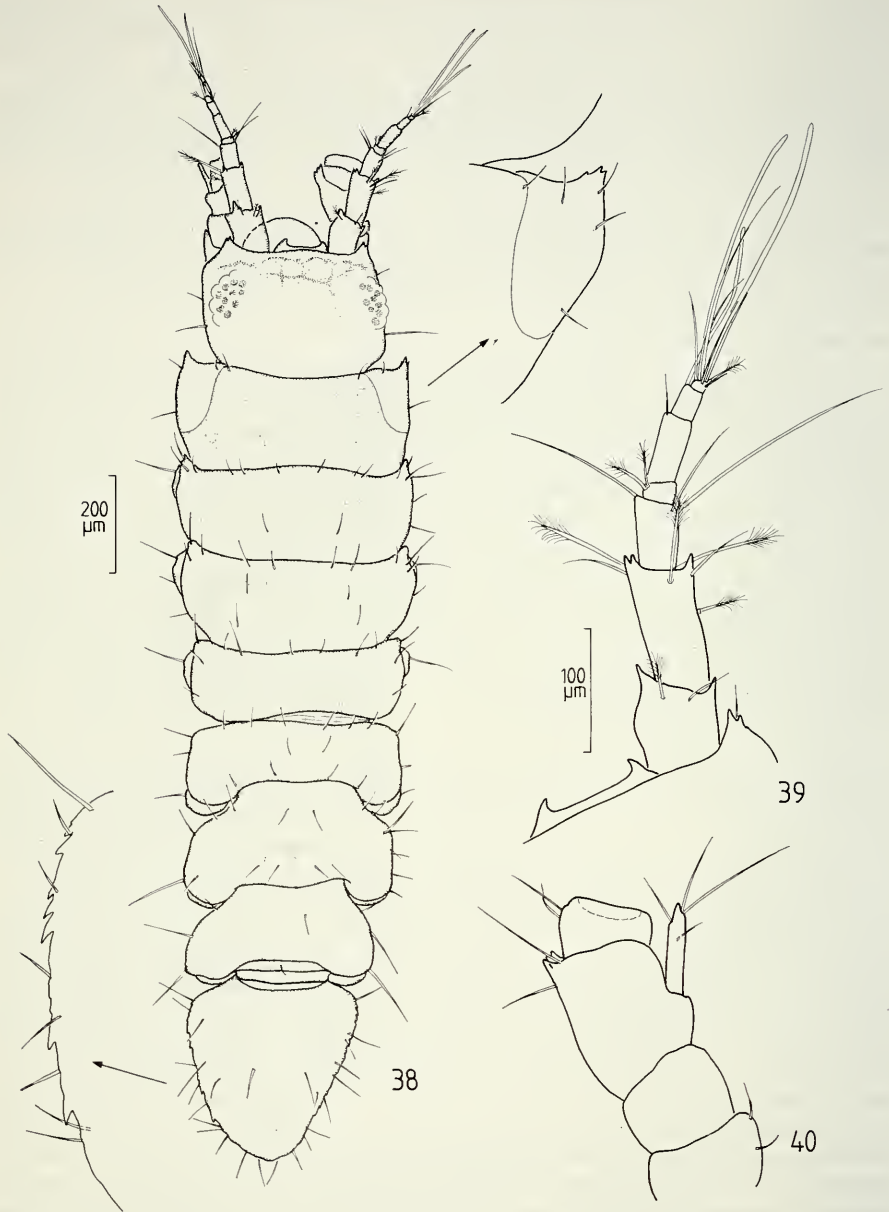
P a r a t y p e s : 1♂, 1 ov. ♀ (SMF 18626); together with holotype. 4♂♂, 3♀♀ (1 larviger), 6 immature adults (MHNG), Moorea; crest of Tiahura barrier reef, dead corals, 0.5-1 m, 25 March 1988. 9♂♂, 6♀♀ (4 ov.), 3 immature adults (MNHN), Bora Bora; fringing reef near Vaitape, dead corals covered with sponges and algae, 0.5-1 m, near slope, 27 February-6 March 1988.

D i a g n o s i s : *Stenetrium* with pereopod 1 not sexually dimorphic, distinguished from all other members of the genus through its general habitus in combination with pigment pattern, shape of pereopod 1 and endopod of the second ♂ pleopod.

D e r i v a t i o n o m i n i s : The specific name is derived from the type locality near Maharepa, Moorea.

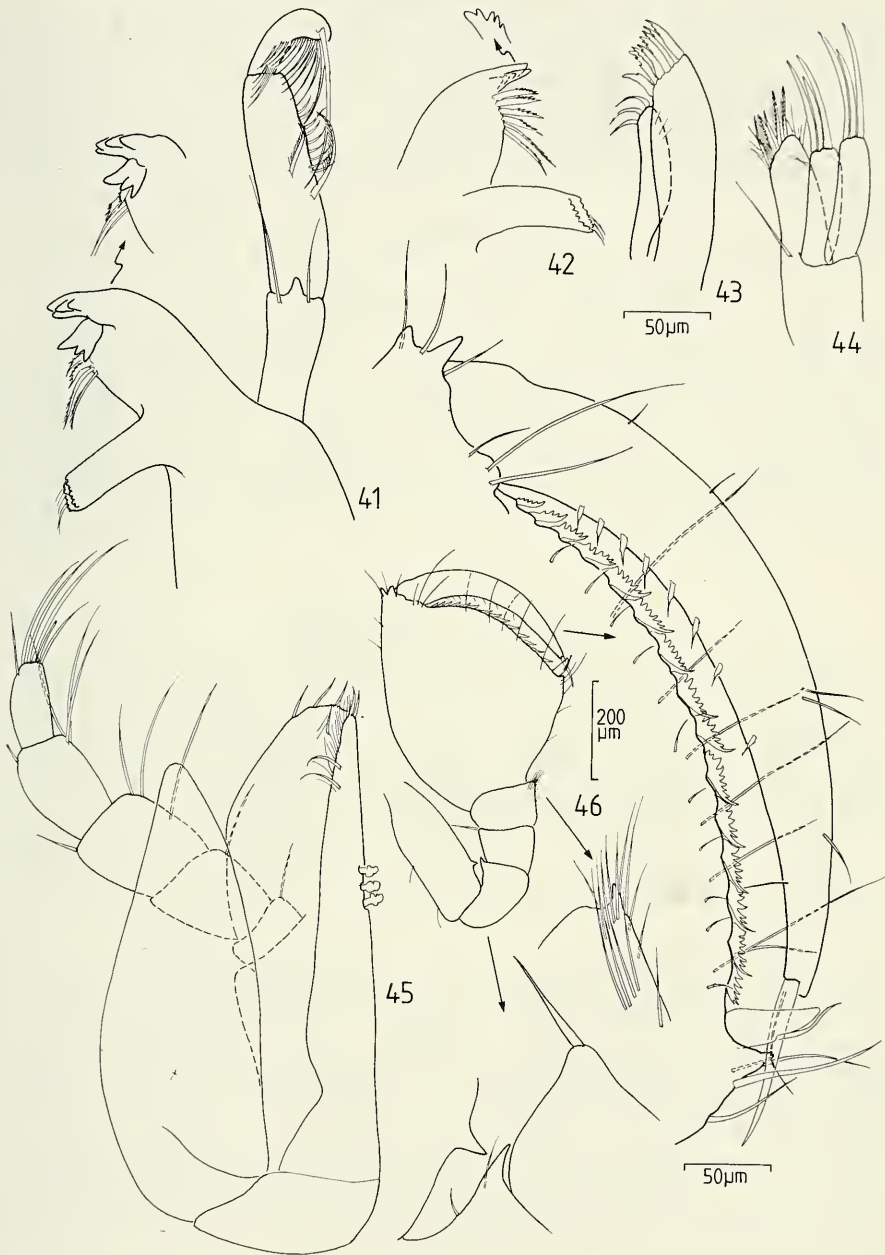
D e s c r i p t i o n , pre-♂, holotype: Total length about 1.9 mm; body about 3.9 times longer than wide, widest at pereonite 1, somewhat narrowing posteriorly. Head with lateral margins entire, with bidentate anterolateral corners, frontal margin almost straight; rostral plate much wider than long, lateral corners produced into toothlike process; dorsolateral eyes large, composed of about 10, relatively large and well pigmented ocellae. Pereonite 1 with coxa enlarged, distally acute and produced, forming anterodistal edge of pereonite; suture line between pereonite and coxa distinct. Pereonites 2-3 with anterolateral corners almost acute, subequal in length; pereonites 5-7 with posterolateral margins rounded; coxae of all pereonites visible in dorsal view. Free pleonites vestigial. Pleotelson tapering distally, lateral margins irregularly dentate. Lateral margins and dorsal surface of body with scattered simple setae of different lengths. Pereonites 1-3 with large medial, posteriorly directed ventral spine. Head, pereonites 1-6 and pleotelson with scattered irregular pigment reticulations.

Antenna 1, peduncle of 3 segments, distal margin of two distal peduncle segments produced into small teeth; flagellum of 4 articles, proximal one shortest, second longest; penultimate article with one, terminal article with two aesthetascs. Antenna 2, broken off at fourth peduncle segment; segment 3 with setiferous squama. Right mandible, incisor of 5 cusps; spine row of 4 serrate and 2 fringed spines; apex of molar blunt, with several tubercles and three short setae. Left mandible, incisor of 4 cusps, lacinia mobilis of 3 cusps; spine-row with 2 serrate and 2 fringed spines; molar as in right mandible. Mandibular palp 3-segmented; second segment with 2 fringed spines and row of about 9 short setae; third segment with row of many curved setae increasing in length distally. Maxilla 1, narrow inner lobe with 3 distal spines; outer lobe with about 7 serrate spines. Maxilla 2, inner ramus with about 6 distal, partly fringed spines, medial margin with elongate simple seta; both lobes of outer ramus with 3 curved distal spines. Maxillipedal endite becoming narrower distally, bearing some short setae, medial margin with 3 coupling hooks; palp segments 2-4 of 5-segmented palp longest, subequal in length; epipod extending beyond distal margin of third palp segment. Pereopod 1 with propodus greatly enlarged and flattened; propodus with anterodistal corner near insertion of dactylus bidentate; palm curved, with row of about 15 short and curved dentate spines, large compound spine proximally; dactylus long and curved, cutting edge with about 8 short spines in proximal two thirds; unguis spine-like, reaching beyond compound spine of propodal palm; carpus wider than long, posterodistal corner densely setose; anterodistal margin of ischium and basis with single, toothlike process. Dactyli of ambulatory pereopods 2-7 biunguiculate. Uropods not observed, broken off.



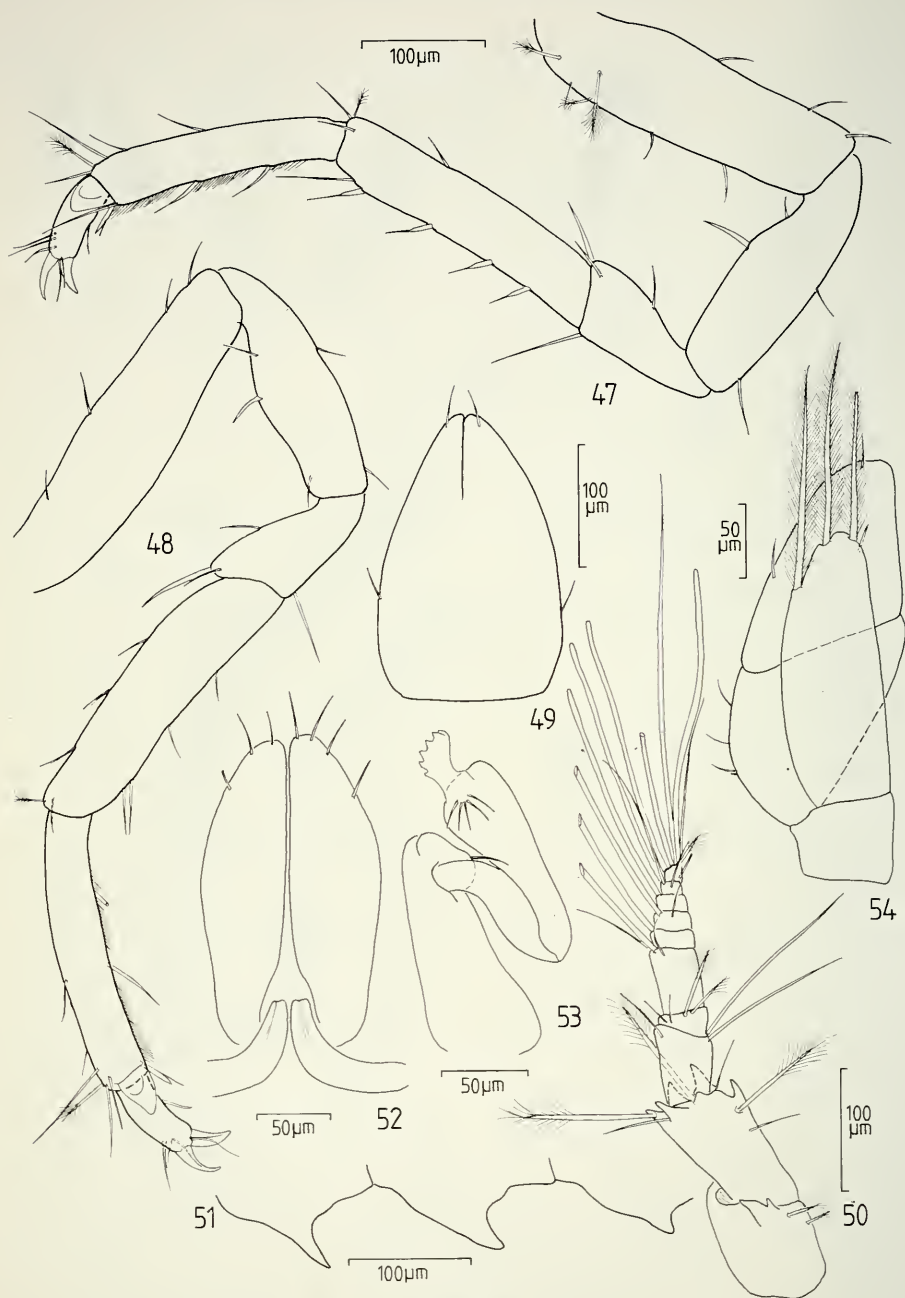
FIGS 38-40.

Stenetrium maharepa n. sp., pre- σ holotype: 38) dorsal view; 39) antenna 1 and anterolateral margin of cephalon; 40) 4 proximal segments of antenna 2.



FIGS 41-46.

Stenetrium maharepa n. sp., pre-♂ holotype: 41) left mandible; 42) right mandible, palp omitted; 43) maxilla 1; 44) maxilla 2; 45) maxilliped; 46) pereopod 1.



FIGS 47-54.

Stenetrium maharepa n. sp. (pre-♂ holotype: 47-48; ♀ paratype: 49; ♂ paratype: 50-54): 47) pereopod 2; 48) pereopod 7; 49) operculum; 50) antenna 1; 51) ventral processes of pereonites 1-3; 52) first pleopods with penes; 53) pleopod 2; 54) pleopod 3.

♂: Antenna 1 with distal margins of two proximal peduncle segments dentate; flagellum of 7 articles, the second being longest; articles 2-6 with single aesthetasc, terminal article with 3 aesthetascs. First pleopods roughly oval, 3-4 simple setae near outer distal margin; endopod of pleopod 2 with 5 distal setae in semicircular arrangement and terminal, widened, dentate tubercle. Pleopod 3 with operculum-like, 2-segmented exopod, bearing few simple setae along outer and distal margin; endopod about half as wide as exopod, with 3 long plumose setae extending beyond distal margin of exopod. All other features similar to pre-♂.

♀: Habitus as pre-♂ and ♂, operculum shield-like, bluntly triangular, with mediobasal slit reaching back almost 1/3 of total length.

D i s t r i b u t i o n : Bora Bora and Moorea, Society Islands.

R e m a r k s : *S. maharepa* n. sp. appears to be the sister-species of *Stenetrium patulipalma* Kensley, 1984 from Belize and Barbados in the Caribbean (see KENSLEY 1984: 52, Figs 33, 34). Both species are quite similar in their general appearance. The best features to distinguish *S. maharepa* n. sp. from *S. patulipalma* are the shape of the distal endopod of the ♂ second pleopod, bearing setules in the latter and dentations on a widened tubercle in *S. maharepa*. Also, the distal plumose setae of the endopod of ♂ pleopod 3 do not extend beyond the distal margin of the exopod in *patulipalma*, unlike *S. maharepa*.

***Stenetrium temae* n. sp. (Figs 55-67)**

H o l o t y p e : ♂ (SMF 18627), Moorea; Temae, the Islet Reef, north-east of airport, channel near beach, about 2 m, dead corals, 31 March 1988.

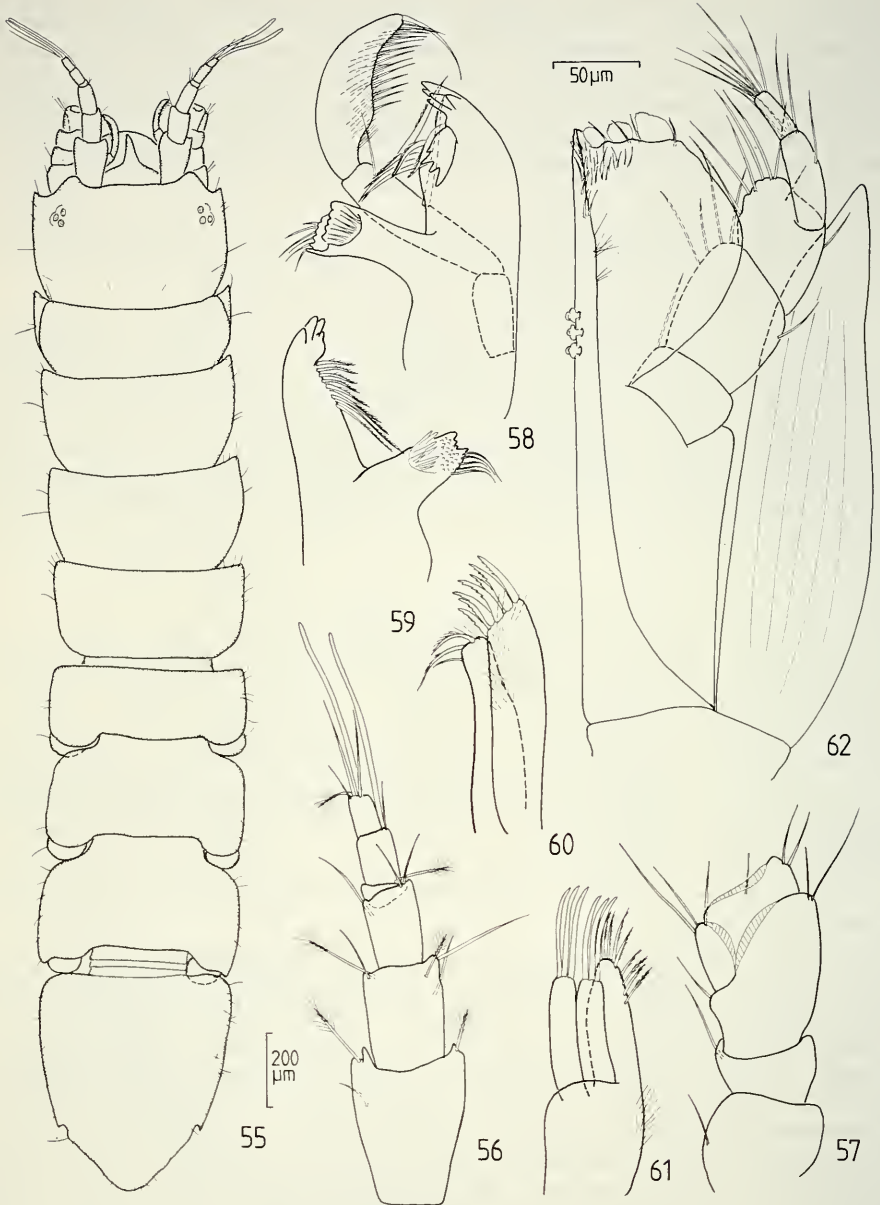
P a r a t y p e s : 3 ♀ (1 ov.), (2 ♀ MHNG, 1 ov. ♀ MNHN), Moorea; coral slope of exposed fringing reef near Afareaitu, dead corals, 1-2 m, 26 March 1988.

D i a g n o s i s : Species with acute rostral plate, eyes reduced two about 3 ocellae, absence of any pigment pattern, pleotelsonic margins with single posterolateral tooth and pereopod 1 similar in both sexes.

D e r i v a t i o n o m i n i s : The specific name is derived from the type locality, Temae Reef at Moorea.

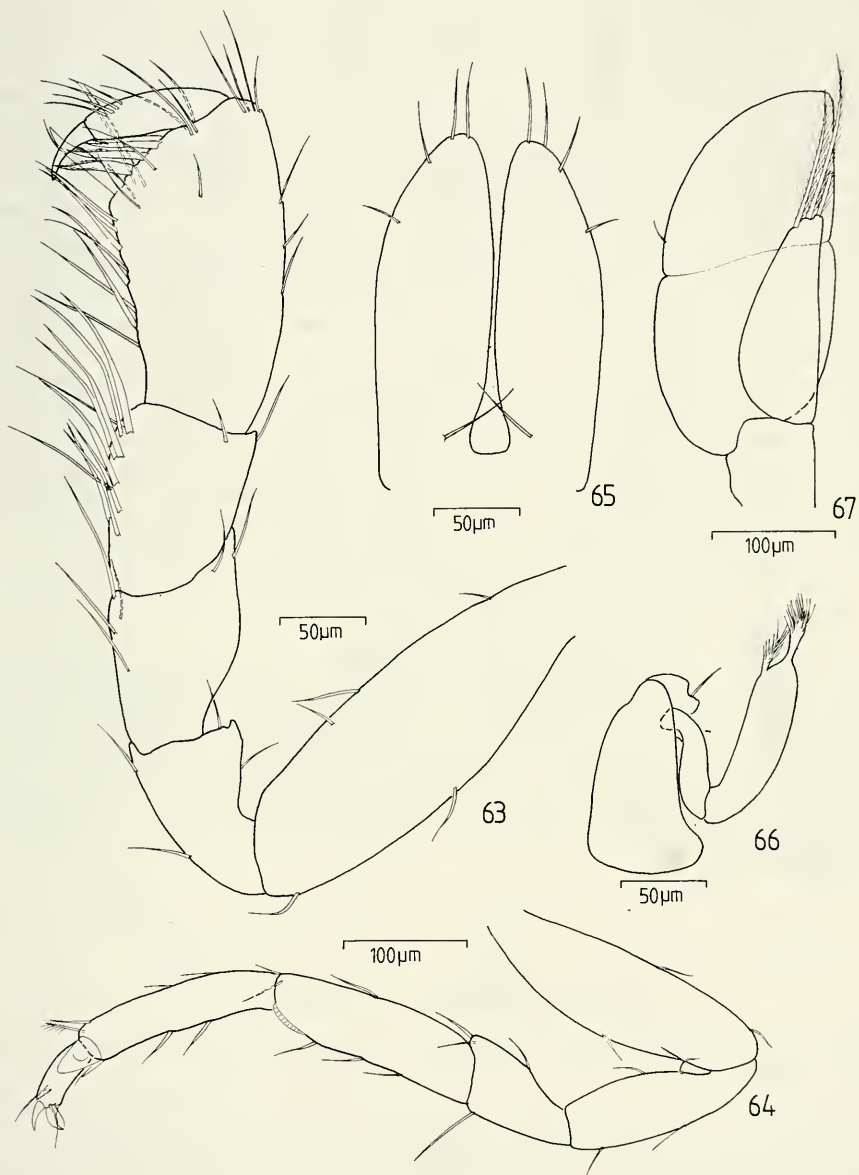
D e s c r i p t i o n , ♂ holotype: Body narrow, parallel-sided, about 5.4 times longer than wide. Total length about 2.9 mm. Head with lateral margins entire, anterolateral corners acute; rostral plate broad at base, distal half narrow with apex pointed; dorsolateral eyes reduced to about 3, weakly pigmented ocellae. Coxae of pereonite 1 enlarged to form anterolateral edges of pereonite; coxae of pereonite 1 distally produced and acute; suture line between coxae and pereonite visible at high magnification; posterolateral corners of pereonites 5-6 broadly rounded, pereonites 5-7 increasing in length distally. Coxae of pereonites 1 and 5-7 visible in dorsal view. Free pleonites vestigial. Pleotelson 1.2 times longer than wide, lateral margins entire except for single tooth in posterior half. Lateral margins of head, pereonites and pleotelson with few short, simple setae.

Antenna 1, peduncle of 3 segments decreasing in size distally; two proximal peduncle segments each with 2 feathered sensory setae; flagellum of only 3 articles, of which the first one is shortest and widest; penultimate and terminal article with aesthetasc. Antenna 2, peduncle broken off at fourth segment; third segment largest, with setiferous



FIGS 55-62.

Stenetrium temae n. sp., ♂ holotype: 55) dorsal view; 56) antenna 1; 57) 4 proximal segments of antenna 2; 58) left mandible; 59) right mandible, palp omitted; 60) maxilla 1; 61) maxilla 2; 62) maxilliped.



FIGS 63-67.

Stenetrium temae n. sp., ♂ holotype: 63) pereopod 1; 64) pereopod 7; 65) first pleopods; 66) second pleopod; 67) third pleopod.

squama. Right mandible, incisor of 4 cusps, spine-row of 8 fringed spines; apex of molar with several tubercles and short setae; second joint of three-segmented mandibular palp with 2 strong spines, distal joint with several curved setae and setules. Left mandible, incisor of 5 cusps, lacinia mobilis with 4 cusps, spine row of 5 fringed spines; left mandible otherwise as right mandible. Maxilla 1, narrow inner lobe with 2 distal fringed spines and simple seta; outer lobe with about 7 dentate spines. Maxilla 2, inner ramus with 8 fringed spines along medial and distal margin; inner and outer lobe of outer ramus with 3 distal, curved spines. Outer margin of maxillipedal endite widened, medial margin with 3 coupling hooks; endite with several distal setae and setules, also with 3 leaf-like, oval spines; second segment of 5-segmented palp largest; epipod just reaching beyond distal margin of third palp segment. Prehensile pereopod 1 somewhat larger than ambulatory pereopods 2-7; posterior margins of propodus and carpus of pereopod 1 bearing several long setae and spines; palm of propodus almost straight, with 4 fringed spines and large proximal compound spine; dactylus almost straight with unguis extending beyond proximal compound spine of propodal palm. Ambulatory pereopods 2-7 similar to each others, dactylus with 2 claws, spination and length ratios of segments as figured. Rami of first pleopods fused at base, 4 simple setae along outer distal margin. Pleopod 2, endopod distally with two oval projections bearing brush of setules. Operculum-like exopod of pleopod 3 two-segmented, distal segment with short simple seta near outer proximal margin; endopod narrow, tapering distally with 3 plumose setae extending somewhat beyond apex of exopod. Uropods not observed, broken off.

♀: All features like in ♂, with exception of bearing fully developed oostegites.

D i s t r i b u t i o n : Moorea, Society Islands.

R e m a r k s : *S. temae* n. sp. seems to be more closely allied with *Stenetrium syzygus* (Barnard, 1940) from South Africa. It can be easily distinguished from that species through the presence of posterolateral incisions at the pleotelson (see SCHULTZ 1982: 57, Fig. 32). Three of the four specimens of *S. temae* collected are hermaphrodites with well developed oostegites and ♂ pleopods. No true females have been found. This feature is known also from *S. syzygus* (WOLFF 1962: 225) and another species new to science the author recently discovered at Réunion Island, southern Indian Ocean (MÜLLER, in press).

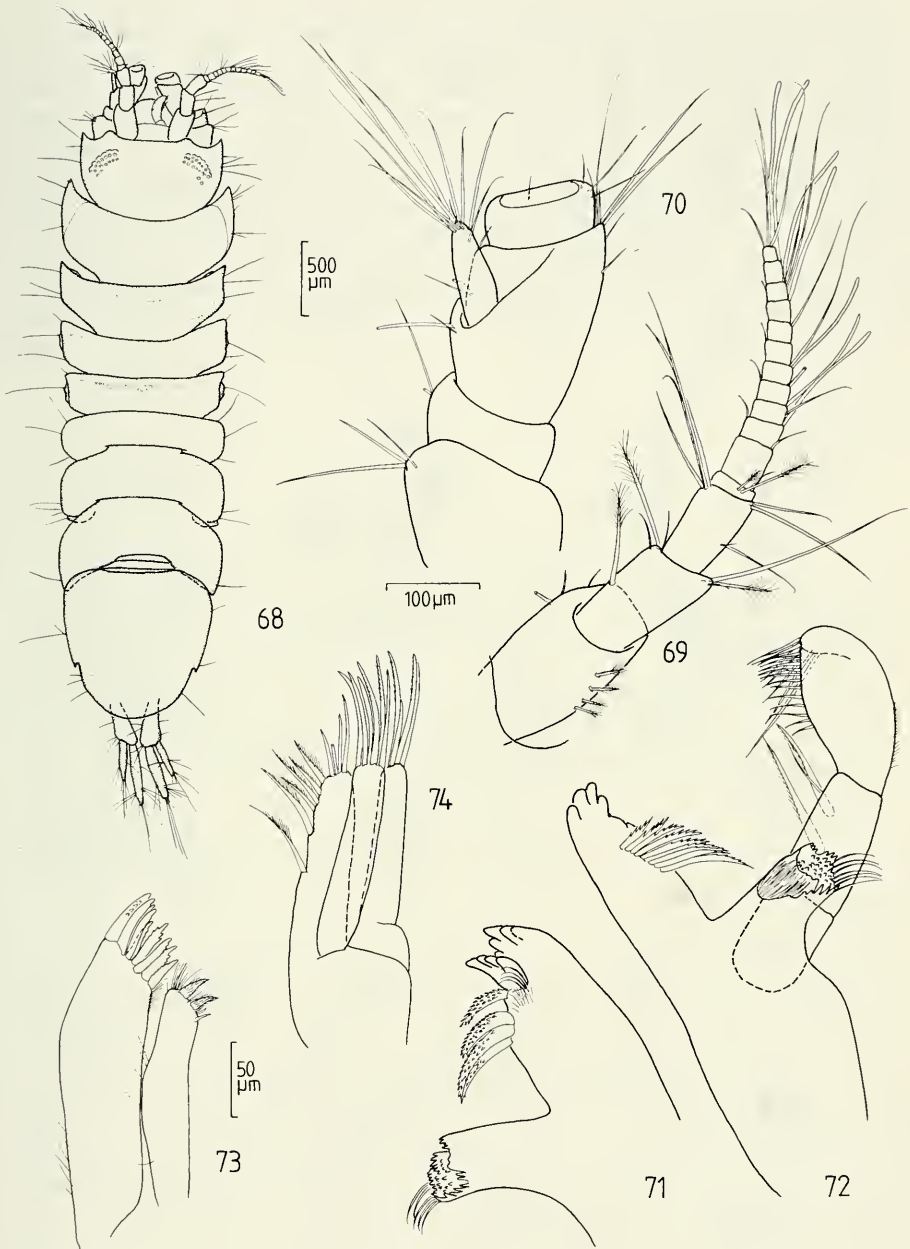
***Stenetrium wilsoni* n. sp. (Figs 68-84)**

H o l o t y p e : ♂ (SMF 18628), Moorea; crest of Tiahura barrier reef, dead corals, 0.5-1 m, 25 March 1988.

P a r a t y p e s : 10♂♂, 11♀♀ (5 ov., 1 larviger), 22 immature adults (SMF 18629); together with holotype. 8♂♂, 8♀♀ (5 ov.) (MHNG), Moorea; crest of barrier reef near Maharepa, about 2.6 km west of airport, dead corals, 0.5 m, March 1988. 1♂ (MNHN), Moorea; crest of barrier reef near Maharepa, *Sargassum*, 0-0.5 m, 15 March 1988. 1 immature adult (MNHN), Moorea; Temae, the Islet Reef, north-east of airport, dead corals in channel near beach, about 2 m, 31 March 1988.

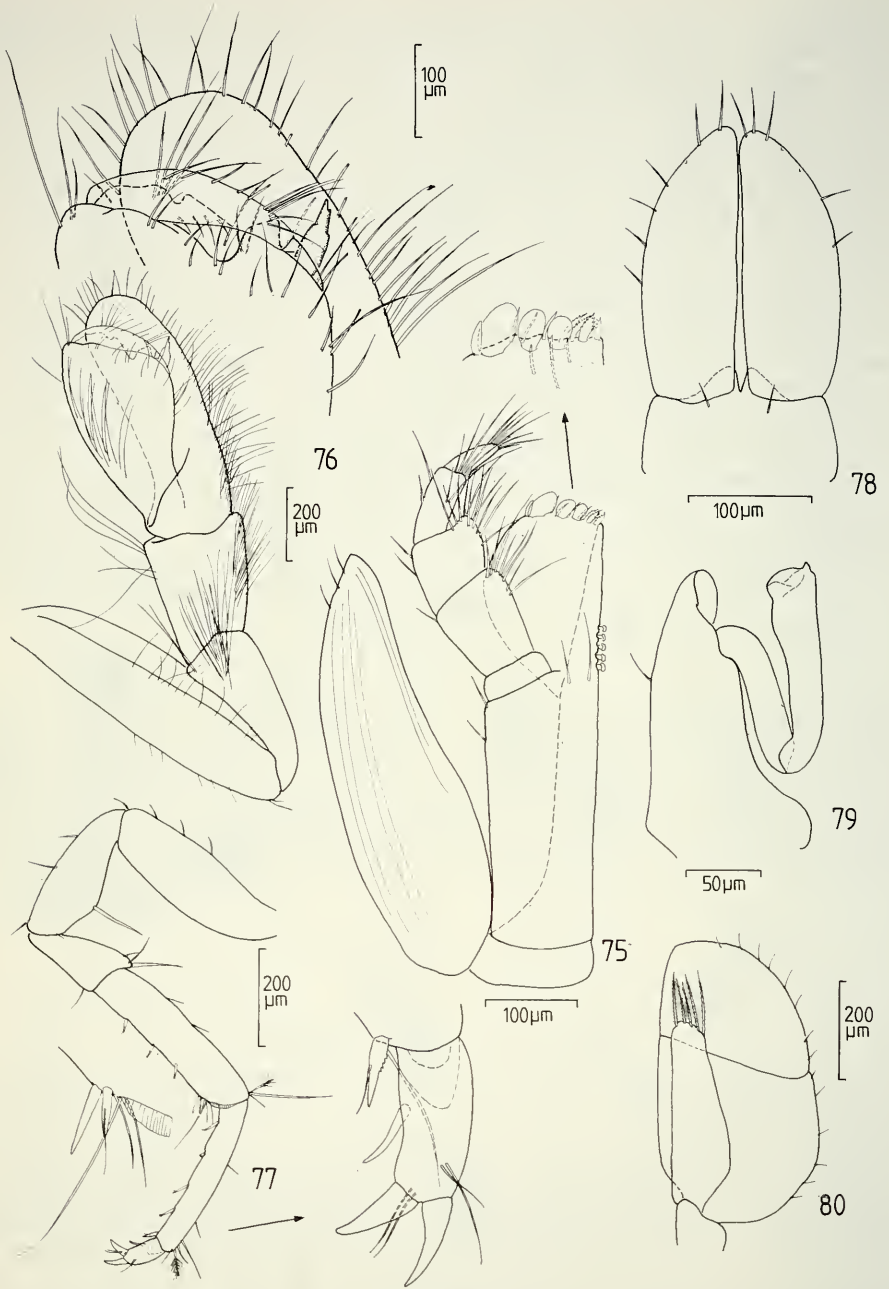
D i a g n o s i s : *Stenetrium wilsoni* n. sp. is well characterized through its general habitus and pigment pattern, in combination with shape of ♂ pereopod 1 and pleopods.

D e r i v a t i o n o m i n i s : This species is dedicated to Dr. George D. F. Wilson, Australian Museum, Sydney, for his valuable contributions in asellote taxonomy.



FIGS 68-74.

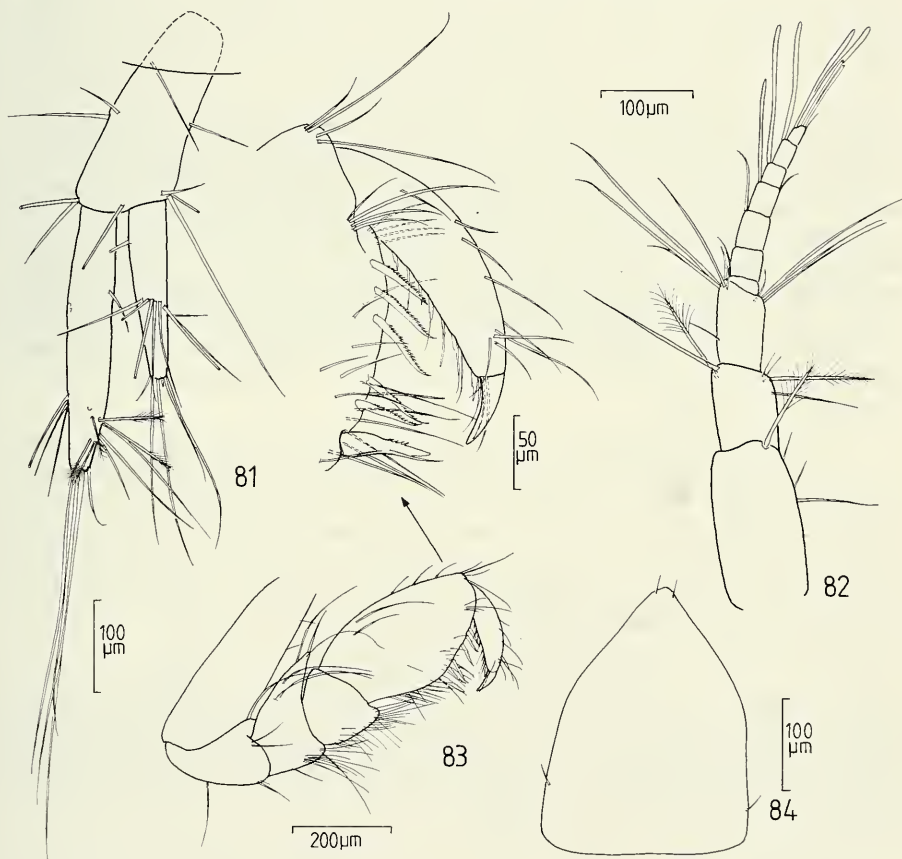
Stenetrium wilsoni n. sp., ♂ holotype: 68) dorsal view; 69) antenna 1; 70) 4 proximal segments of antenna 2; 71) left mandible, palp omitted; 72) right mandible; 73) maxilla 1; 74) maxilla 2.



FIGS 75-80.

Stenetrium wilsoni n. sp., ♂ holotype: 75) maxilliped; 76) pereopod 1; 77) pereopod 2; 78) first pleopods; 79) second pleopod; 80) third pleopod.

Description, ♂ holotype: Body relatively slender, parallel-sided, about 3.5 times longer than wide. Total length about 4.0 mm. Head with lateral margins entire, with acute anterolateral corners and rounded antennal lobes; frontal margin straight; rostral plate blunt, faintly convex; dorsolateral eyes large, well pigmented with about 15 ocellae. Pereonite 1 with coxae enlarged, distally produced and acute, forming anterolateral edges of pereonite; suture line between pereonite and coxae distinct. Pereonites 2-4 with anterolateral corners almost acute, pereonites 1-4 decreasing in length posteriorly; posterolateral edges of pereonites 5-6 rounded, of pereonite 7 acute; pereonites 5-7 increasing in length posteriorly. Coxae of pereonites 1-4 and 6 visible in dorsal view. Free pleonites vestigial. Pleotelson as long as wide, lateral margins entire with exception of posterolateral incision; posterior margin between incisions almost semi-circular. Only dorsal surface of pereonites 2-4 and 6 with faintly developed pigment pattern.



FIGS 81-84.

Stenetrium wilsoni n. sp. (81: ♂ holotype; 82-84: ♀ paratype): 81) uropod; 82) antenna 1; 83) pereopod 1; 84) operculum.

Antenna 1, peduncle of 3 segments decreasing in size distally; flagellum of about 12 articles, the second being longest; all articles with exception of first and second bearing aesthetasc (partly broken off in holotype); elongate simple setae on peduncular segments 2-3. Antenna 2, broken off at fourth peduncle segment, segment 3 with setiferous squama. Right mandible, incisor of 4 cusps, spine row of about 9 serrate spines: apex of molar blunt, with many tubercles and short setae; second joint of 3-segmented palp with 2 strong, fringed spines; third joint with many curved setae. Left mandible, incisor of 5 cusps, lacinia mobilis with 4 cusps; spine-row of 4 robust spines bearing numerous denticles. Maxilla 1, narrow inner lobe with 2 distal plumose spines, two short simple setae and several setules. Maxilla 2, inner ramus with 10, partly fringed spines along medial and distal margin; inner lobe of outer ramus with 6, outer lobe of outer ramus with 4 distal, curved spines. Ectal margin of maxillipedal endite convex, medial margin with 5 coupling hooks; ventral surface near coupling hooks with 2 simple setae; distal margin of endite with several spines of different shape, as figured; second segment of 5-segmented palp longest; epipod with 3 short simple setae at outer distal margin; epipod not extending beyond distal margin of third palp segment. Palm of pereopod 1 propodus of complex shape, with strong proximal tubercle and spine, as figured. Dactylus curved, with several simple setae; short unguis extending beyond proximal spine of propodal palm; distal margin of carpus produced into large, broadly rounded and setose lobe extending beyond distal margin of propodus; posterior margins of propodus and carpus densely setose. Ambulatory pereopods 2-7 similar to each others, dactyli with 2 claws; spination and length ratios of segments as figured. First pleopods, medial margins of rami parallel-sided, outer margins tapering in distal half, with 6-7 simple setae. Endopod of second pleopod widened distally, apex with single tooth. Pleopod 3 with large, operculum-like, 2-segmented exopod; outer margin of exopod with about 14 short, simple setae; endopod narrow with 5 feathered setae not extending beyond distal margin of exopod. Peduncle of uropods 2.4 times longer than wide, inner ramus 1.5 times longer than outer ramus, both bearing several simple setae; additionally, inner ramus with about five distal feathered sensory setae.

♀: Similar in its habitus to ♂. Antenna 1, flagellum of only 7 articles, articles 4-6 with one, terminal article with two aesthetascs. Pereopod 1 smaller than in ♂, palm of propodus with about 5 curved, fringed spines and proximal compound spine, as figured; cutting edge of dactylus with about 5 short spines and some simple setae; unguis just extending beyond compound spine of propodal palm; posterior margin of propodus, carpus and merus densely setose. Shield-like operculum 1.3 times longer than wide with simple seta at outer proximal margin and pair of short setae near apex.

D i s t r i b u t i o n : Moorea, Society Islands.

R e m a r k s : *S. wilsoni* n. sp. is unique within the genus through its very long, distally broadly rounded projection of the carpus in the ♂ pereopod 1. Actually no other species with such a feature is known making it difficult to discuss interspecific relationships. There may be affinities to *S. hanseni*, a species of similar habitus with a shorter, dentate lobe at the carpus of ♂ pereopod 1.

CONCLUSIONS

The marine isopod family Stenetriidae in shallow waters on coral reefs of Bora Bora and Moorea, Society Islands is represented by 5 species, 4 being new to science. Most of these are common members of the reef community, preferring more or less exposed locations.

Marine isopods of shallow water habitats in the tropical Pacific are poorly known, making it difficult to discuss interspecific relationships. Two of the species found at the Society Islands, *S. algrei* and *S. maharepa* clearly show affinities to the Caribbean. One, *S. temae* is closely allied with two species from the south-western Indian Ocean. The affinities of *S. hanseni* and *S. wilsoni* to species from other geographic areas are still obscure.

ZUSAMMENFASSUNG

Es wird über 5 Arten mariner Isopoden der Familie Stenetriidae von Korallenriff-Habitaten auf Bora Bora und Moorea, Gesellschaftsinseln berichtet. 4 Arten, *Stenetrium algrei* n. sp., *S. maharepa* n. sp., *S. temae* n. sp. und *S. wilsoni* n. sp. erwiesen sich als neu für die Wissenschaft. *Stenetrium hanseni* Nobili, 1906, bisher nur von dem Tuamotu-Archipel bekannt, wird wiederbeschrieben. Die behandelten Arten fanden sich vergesellschaftet mit totem Korallensubstrat in mehr oder weniger exponierten Riffabschnitten. Soweit erkennbar, sind bei 2 Arten Beziehungen zur karibischen Fauna und bei einer Spezies zum süd-westlichen Indischen Ozean erkennbar.

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